

REMARKS

Claims 1-10 are rejected under 35 U.S.C. §112, first paragraph, as based on a disclosure which is not enabling. Claim 1 has been amended such that it is believed that the rejections are overcome. Specifically, the source electrode is now recited as being connected to the body contact region instead of being in contact with the body contact region. Support for this language is found in the specification at least at page 6 lines 3 through 5. Also, the body contact region is no longer referred to as on the source region. It is believed that the rejections are overcome, and, accordingly, reconsideration of the rejections under 35 U.S.C. §112, first paragraph, is respectfully requested.

Claims 1-10 are rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements. Specifically, it is stated that the relationship between the insular silicon region and the insular body region is omitted. Claim 1 is amended such that it is believed the rejections are overcome. Specifically, the claims now recite that the insular body region is formed in the insular silicon region. Support for this language is found in the specification at least at page 5 lines 15 through 18. It is believed that the rejections are overcome. Therefore, reconsideration of the rejections of the claims under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 1-7 and 9 are rejected under 35 U.S.C. §102(b) as being anticipated by Cherne, et al. (H14235). Claims 8 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Cherne, et al. In view of the amendments to the claims and the following remarks, the rejections are respectfully traversed, and reconsideration of the rejections is requested.

The applicants' invention is directed to a semiconductor device with a silicon-on-insulator (SOI) structure. Referring to Figures 2A - 2D, the applicants' claimed structure includes an insulating layer 110 and an insular silicon region 120 formed on the insulating layer. Source and drain regions 130 and 140, respectively, are formed at the ends of the insular silicon region. An insular body region 150 is formed in the insular silicon region between the source

Applicant(s): Min-su Kim, et al.
U.S. Serial No.: 09/994,146

and drain regions, and a body contact region 160 is formed to be connected to and in contact with the source region 130 and the insular body region 150. A conductive layer 170 is formed on the source region and the body contact region, and a source electrode 210 is formed connected to the body contact region.

The claims have been amended to more clearly set forth the features of the applicants' invention. Specifically, the claims have been amended to clarify that the body contact region is not only connected to the source region and the insular body region, but is also in contact with the source region and the insular body region. It is believed that this clarifying claim language serves to distinguish the Cherne, et al. reference.

Cherne, et al. disclose an SOI CMOS device with sidewall channel stops. In Cherne, et al., channel stop regions 71 and 72 are formed as heavily over doped regions at end portions of source and drain mesa regions, thereby forming a channel stop structure having first and second mesa sidewall channel stops 81, 82 immediately adjacent to ends 83, 84 of a body/channel region 14. The channel stop regions 71, 72 inhibit sidewall inversion (see Figures 9 and 10, and column 5, line 18 through column 6, line 13).

The Examiner refers to region 72 of Cherne, et al. as a body contact region. However, the applicants' can find no disclosure of the channel stop region 72 of Cherne, et al. being a body contact region. Furthermore, even if channel stop region 72 were considered to be a body contact region, it is not in contact with and connected to a source region and an insular body region of the device, as now set forth in the applicants' amended claims.

The Cherne, et al. reference fails to teach or suggest the invention claimed by the applicants' in the amended claims. Specifically, Cherne, et al. fail to teach or suggest an SOI structure in which a body contact region is in contact with and connected to a source region and an insular body region of the device. Accordingly, it is believed that the amended claims are allowable over Cherne, et al., and reconsideration of the rejections of claims 1-7 and 9 under 35 U.S.C. §102(b) based on Cherne, et al. is respectfully requested. Likewise, since Cherne, et al. fail to teach or suggest the invention set forth in the amended claims, reconsideration of the rejections of Claims 8 and 10 under 35 U.S.C. §103(a) based on Cherne, et al. is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by the


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U.S. Serial No.: 09/994,146

current Amendment. The attached pages are captioned "Version with Markings to Show Changes Made."

In view of the foregoing remarks, it is believed that all claims pending in the application are in condition for allowance, and such allowance is respectfully solicited. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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Version with Markings to Show Changes Made

1. (Amended) A semiconductor device having a silicon-on-insulator (SOI) structure, comprising:

an insulating layer;

an insular silicon region having first conductive impurity ions formed on the insulating layer;

a source region having second conductive impurity ions formed at an end of the insular silicon region;

a drain region having second conductive impurity ions spaced apart from the source region at the other end of the insular silicon region;

an insular body region [which is] formed in the insular silicon region, the insular body region being disposed between the source and drain regions, [and on which] a channel [is] being formed on the insular body region;

a body contact region having first conductive impurity ions, the body contact region being in contact with and connected to the source region and the insular body region;

a conductive layer formed on the source region and the body contact region; and

a source electrode [in contact with] connected to the body contact region [on the source region].